

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An assembly for a fuel cell, comprising:

a fluid flow field plate having a field plate ~~channels~~ channel in a surface of the fluid flow field plate that extends ~~extend~~ across the surface in a predetermined pattern;

a distribution foil having distribution channels in a surface of the distribution foil thereof, ~~each distribution channel extending from a first edge of the distribution foil to a second edge of the distribution foil, each of the distribution channels terminating at the second edge at different positions, each of the different positions being substantially coincident with, and in direct fluid communication with, a respective field plate channel, the distribution channels providing water injection points for the field plate channels and enabling delivery of water directly into corresponding field plate channels at the water injection points; and~~

a cover foil extending over the distribution foil to enclose the distribution foil channels and thereby form water injection conduits ~~for water~~ between the distribution foil and the cover foil, the water injection conduits each having a corresponding water injection conduit outlet, each water injection conduit output being over the field plate channel to thereby allow water to be injected directly into the field plate channel, wherein water

injection conduit outputs of the water injection conduits are configured to inject water at different positions in the field plate channel.

2. (Currently Amended) The assembly of claim 1, wherein the distribution channels comprise:

a first series of channels extending to ~~the~~ a first edge of the distribution foil;

an array of channels, in communication with the first series of channels, forming a pressure distribution gallery; and

a second series of channels, in communication with the array of channels, extending to ~~the~~ a second edge of the distribution foil.

3. (Currently Amended) The assembly of claim 1, wherein ~~the distribution foil channels terminate at the second edge of the distribution foil at a plurality of~~ a subset of the water injection conduit outlets are configured in a convergence structure that is ~~structures adapted to focus water flow into corresponding the field plate channel channels in the fluid flow field plate.~~

4. (Currently Amended) The assembly of claim 3, wherein ~~each~~ the convergence structure comprises a recess in ~~the second~~ an edge of the distribution foil.

5. (Currently Amended) The assembly of claim 4, wherein the recess comprises an arcuate cut out in the ~~second~~ edge of the distribution foil.

6. (Currently Amended) The assembly of claim 1, wherein the distribution channels ~~terminate at the first edge of the distribution foil at~~ are in fluid communication with at least one supply manifold aperture in the fluid flow field plate.

7. (Previously Presented) The assembly of claim 1, wherein the distribution foil is formed from stainless steel.

8. (Previously Presented) The assembly of claim 1, wherein the distribution foil channels are chemically etched.

9 to 19. (Canceled)

20. (Currently Amended) An assembly for a fuel cell, comprising:
a fluid flow field plate having field plate channels in a surface of the fluid flow plate and extending across the surface in a predetermined pattern;
a distribution foil having distribution channels in a surface of the distribution foil,
~~the distribution channels each extending from a first position proximal to, or at, a first edge of the distribution foil to a second position proximal to, or at, a second edge of the distribution foil, each distribution channel terminating at a different second position, each different second position being substantially coincident with, and in direct fluid communication with, a respective field plate channel, the distribution channels for~~

~~providing water injection points for the field plate channels and enabling delivery of water directly into corresponding field plate channels at the water injection points; and~~

a cover foil co-extensive with a substantial part of the distribution foil to enclose at least part of lengths of the distribution foil channels ~~between the first and second positions and to thereby form water injection conduits for water~~ between the distribution foil and the cover foil, the water injection conduits each having a corresponding water injection conduit outlet, each water injection conduit output being over the field plate channel to thereby allow water to be injected directly into a field plate channel, wherein water injection conduit outputs of the water injection conduits are configured to inject water at different positions in the field plate channel.

21. (Currently Amended) The assembly of claim 20, wherein the distribution channels comprise:

a first series of channels extending to ~~the~~ first positions proximal to, or at, ~~the~~ a first edge of the distribution foil;

an array of channels, in communication with the first series of channels, forming a pressure distribution gallery; and

a second series of channels, in communication with the array of channels, extending to ~~the~~ second positions proximal to, or at, ~~the~~ a second edge of the distribution foil.

22. (Currently Amended) The assembly of claim 20, wherein ~~the distribution foil channels terminate at the second positions~~ a subset of the water injection conduit outlets are configured in a at convergence structures structure that is adapted to focus water flow into corresponding channels in the fluid flow ~~the field plate channel~~.

23. (Currently Amended) The assembly of claim 1, wherein the distribution foil channels terminate at ~~the~~ first positions at at least one supply manifold aperture in the fluid flow field plate.

~~25~~ 24. (Currently Amended) The assembly claims 20, further comprising:
a series of fluid flow field plates, acting as cathodes and/or anodes, in a stack, each fluid flow field plate having a respective membrane-electrode assembly adjacent thereto.

25. (Previously Presented) The assembly of claim 24, wherein each cathode fluid flow field plate has a distribution foil and a cover foil interposed between the each cathode fluid flow field plate and an adjacent membrane-electrode assembly.

26. (Currently Amended) An assembly for a fuel cell, comprising:
a fluid flow field plate having a field plate channels channel in a surface of the fluid flow field plate ~~and extending~~ that extends across the surface in a predetermined pattern;
an adjacent membrane-electrode assembly (MEA) ~~in contact with~~ adjacent to the fluid flow field plate over an active area of the MEA; and

a distribution ~~membrane~~ interposed foil between the fluid flow field plate and the MEA, the ~~membrane~~ distribution foil having distribution channels in a surface of the distribution foil; and ~~water conduits each extending therethrough between a first position proximal to, or at, a first edge of the membrane to a second position proximal to, or at, a second edge of the membrane, each of the water conduits terminating at a different second position, each different second position being substantially coincident with, and in direct fluid communication with, a respective field plate channel, the water conduits providing water injection points for the field plate channels and enabling delivery of water directly into corresponding field plate channels at the water injection points~~

a cover foil extending over the distribution foil to enclose the distribution foil channels and thereby form water injection conduits between the distribution foil and the cover foil, the water injection conduits each having a corresponding water injection conduit outlet, each water injection conduit output being over the field plate channel to thereby allow water to be injected directly into the field plate channel, wherein water injection conduit outputs of the water injection conduits are configured to inject water at different positions in the field plate channel.